



**National Association of Home Builders**

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**Housing Committee  
Public Hearing  
Testimony  
March 10, 2022**

**To: Chairmen Rep. Williams, Sen. Lopes, Ranking Members Rep. Polletta, Sen. Cicarella, and distinguished Members of the Housing Committee**

**From: National Association of Home Builders**

**Regarding: Testimony on Raised S.B. No. 292 AN ACT CONCERNING HEATING EFFICIENCY IN NEW RESIDENTIAL CONSTRUCTION AND MAJOR ALTERATIONS OF RESIDENTIAL BUILDINGS (OPPOSE)**

On behalf of more than 140,000 members, the National Association of Home Builders (NAHB) submits these comments to the Housing Committee on legislation concerning heating efficiency in new residential construction and major alterations of residential buildings.

NAHB appreciates the opportunity to provide comments on S.B. 292 regarding the prohibition on certain heating equipment. NAHB is a federation of more than 700 state and local home builder associations nationwide that work to ensure that housing remains a national priority and that all Americans have access to safe, decent and affordable homes. The organization's membership includes over 140,000 firms engaged in land development, single and multifamily residential construction, design, remodeling, multifamily ownership and management, building material trades, building products manufacturing and supply, and commercial and light industrial construction projects. Over 95 percent of NAHB's members are classified

as “small businesses,” as defined by the U.S. Small Business Administration (SBA). NAHB members collectively employ over 3.4 million people nationwide. Four out of every five new homes are built by NAHB members.

NAHB has a profound interest in ensuring that energy codes serve the consumer and focus on increasing consumers’ access to housing which is affordable to purchase or rent, operate, and maintain. Through engagement by our members and staff, NAHB has been an active participant in the development of energy codes in ICC and ASHRAE forums. NAHB members design, build, and often offer financing for homes and multifamily buildings that must comply with energy codes. Our members understand firsthand the associated impacts on the construction process, consumer’s interest in various features, and home buyer’s ability to finance products priced at an increased premium.

We request that the Assembly considers the broad ramifications of the proposed change to ban certain heating equipment choices before deciding on an appropriate path to proceed. We summarize several key findings from a recent study on the impact of electrification on residential buildings. A summary of the study can be found [here](#) and the full report can be accessed [here](#). The results of the study are based on the analysis of an average single-family house with 2,600 square feet conditioned floor area above grade.

- **Cold climates** such as the state of Connecticut (DOE Climate Zone 5A) would face the greatest challenges from this type of ban, both in terms of initial construction costs and the higher costs to operate the buildings.
- In cold-climates, **heat pumps with variable refrigerant flow** rated for operation during low outdoor temperatures would be needed. Often referred to as cold climate heat pumps, these systems are more expensive: \$8,000-\$9,000 more compared to a gas furnace. The total added cost for an all-electric package modeled in the study ranged from \$10,886 to \$15,100 in colder climates.
- **Annual energy use costs were found to be higher** in colder climates (by about \$275 in CZ 5A and \$650 in CZ 6A). Therefore, unlike electric cars which have a higher price tag but are less expensive to “fuel,” all-electric homes are also more expensive to operate in cold climates.
- A **larger capacity heat pump water heater (80 gallon) with a mixing valve** is needed to match the performance of a gas water heater in cold climates. These HPWH units can cost as much as \$2,800 more compared to a standard gas water heater.
- Consumers who prefer gas cooking would need to transition to more expensive electric alternatives such as **induction ranges** that could add \$1,000 to the price of the house compared to a gas range, plus the cost of compatible cookware. The induction range is intended to provide cooking performance more resembling a gas range.

- With the higher electric demand, **an upgrade in the electric service** on the utility side may be needed. Depending on the local utility tariffs, these costs may be significant and need evaluation.
- In addition, all electric building can lead to increased **peaks in electric loads** that would require other costly measures for the building stock and/or for utilities to moderate these loads.
- There are significant implications for **existing buildings** as well. The study shows that the retrofit cost of electrification for an existing baseline gas house ranges between \$24,282 and \$28,491, not including the additional cost to substitute an induction cooktop (\$1,091- 1,157), install an electric vehicle charger circuit (\$1,266-1,343), or install an electrical service upgrade (a potential substantial additional cost in some cases). By comparison, the retrofit cost of gas equipment and appliances for an existing baseline gas house ranges between \$9,767 and \$10,359 using standard efficiency equipment, and between \$12,658 and \$13,425 using high efficiency gas equipment.
- All these factors will impact **housing affordability**, first in terms of getting access to housing and second in terms of the ability to pay the added utility costs.

In conclusion, we hope that the Assembly will carefully consider all facts and ramifications when developing energy policies impacting consumers and work on developing solutions that are balanced, practical, and cost-effective for the consumer.

Sincerely,

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